DOCUMENT RESUME

ED 293 520 IR 013 044

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TITLE Differential Effects of Television Violence on Kibbutz and City Children.
PUB DATE Jul 86
GRANT MH-31886; MH-38683
NOTE 49p.; Paper presented at the International Television Studies Conference (London, England, July 10-12, 1986).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Aggression; Comparative Analysis; *Content Analysis; Cultural Context; Foreign Countries; Multiple Regression Analysis; News Reporting; Peer Groups; Programing (Broadcast); Social Differences; Television Research; *Television Viewing; Urban Problems; *Violence; *Young Children
IDENTIFIERS *Israel; *Kibbutzim

ABSTRACT

This paper reports the results of a comparative study carried out with populations from two distinct cultural environments: kibbutz and city raised children in Israel. The study examined how perceptions and responses to television differ across social environments and how children's perceptions of, and reactions to, television may affect aggressive behavior differently in different social and cultural environments of the same society. Subjects--first and third graders from two public schools and two kibbutzes--were interviewed three times at one year intervals, and 158 children of the original sample were interviewed in all three waves. Findings of the study showed that among city children there was a significant positive relationship between television violence viewing and amount of aggressive behavior, although among kibbutz children there was no detectable relationship between amount of exposure to media violence and aggression. It is suggested that a number of factors associated with growing up in a kibbutz mitigate the effect of television violence viewing on the development of aggressive behavior. (53 references, 2 end notes, and 12 figures) (CGD)

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Differential Effects of Television Violence on Kibbutz and City Children

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This paper was presented at the International Television Studies Conference in London, England, July 1986. The research was supported in part by grants MH-38683 and MH-31886 to the senior author. Requests for reprints should be sent to L. Rowell Huesmann, Department of Psychology, University of Illinois at Chicago, Box 4348, Chicago, Illinois, 60680.

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Introduction

A child's perception of the reality of television violence and a child's identification with television characters have been hypothesized to mediate the effects of excessive exposure to violence on the development of aggression in children (Huesmann, Lagerspetz & Eron, 1984). Yet, the child's social and cultural environments may strongly affect these perceptions. One of the problems in measuring the importance of such societal variables, even in cross-national studies (e.g., Huesmann, et al., 1984) , is that one can seldom find populations of children whose social environment has differed for most of their lives in well prescribed ways. An exception is the population of kibbutz raised and city raised children in Israel. There are no apriori genetic, physiological or constitutional differences in their populations that should relate to TV habits or aggressive behavior. Although the child rearing to which they are exposed, their social environments (particularly in regard to television) and their norms about aggression appear quite different, both populations belong to the same society. A comparison of these populations also ameliorates another difficulty frequently encountered in field studies designed to examine how social factors affect one's perceptions of television and reactions to television. Often within a society there is insufficient variation in the social factors for an adequate exploration of their effects. The populations of kibbutz and city raised children in Israel differ substantially in their social structure. Thus, they represent valuable comparison groups for examining how perceptions and responses to television differ across social environments and for examining how the child's perceptions of and reactions to television violence may affect aggressive behavior differently in the different environments.

Daily Life for the Kibbutz and City Child

The extensive differences between the structure of the lives of kibbutz raised and city raised children in Israel have been well documented elsewhere (Kaffman, 1965; Rabin & Beit-Hallahmi, 1982) and will only be briefly summarized here.

The city children typically attend school 6 days a week from 8 to noon or 1 p.m. The rest of their time is spent at home or in activities with their peers. Since women work in the majority of Israeli homes, the child is often supervised in the afternoon by an older sibling, neighbor or hired caretaker. However, since the main meal of the day is generally taken at noontime in Israel, many working mothers do come home and see the child at that time. In the evening the family will eat a small meal generally, after 7 p.m. when the shops have closed. City schools usually have relatively large classes, e.g., 40 children, with a substantial turnover from year to year of both children and teachers. While children may form strong bonds with individual peers, there is by no means the general group cohesiveness and tightly knit peer bonds that exist among kibbutz children.

Typically, a kibbutz raised child will live with mostly the same peers from birth through the end of high school. The size of the same age peer group or class is likely to be closer to 15 than 40. Since children are constantly taught that one must always consider the good of the group, it is not surprising that a closely bonded peer group emerges in which prosocial behavior is emphasized. The kibbutz raised child's daily schedule during the elementary school years will be somewhat different from the city child's. After waking at about 6:30, the children immediately go to the classroom which is in the same building as the sleeping and dining rooms. After about an hour of instruction, breakfast will be taken. Formal classroom instruction generally ends by noon

when the main meal is eaten again as a group. Often a break from classes will be taken during the morning for the children to work on kibbutz projects. After the mid-day meal, the children will spend time in smaller groups on sports, crafts and other extracurricular activities as well as resting in their sleeping rooms. At 4:30 in the afternoon, the children go to their parents' quarters where they may eat snacks, do homework, talk and play with their parents, siblings and friends, or watch television. Around 7 p.m. the children would eat the evening meal with their parents either in the kibbutz dining hall or in the parents' quarters. After dinner they return to their childrens' house where they may do homework, read, or have group meetings and activities. Once or twice a week they may watch TV as a group at this time. By 9 p.m. they would be going to sleep.

Exposure to Violence

While violence in Israel is an ever present daily threat for most people, children seldom see violent acts in person. Terrorism and war affect everyone, but more often indirectly rather than directly. Still, crime and concern about crime have generally been increasing in Israel over the last decade (Landau & Beit-Hallahmi, 1982). However, the crime rates in kibbutz society remain much lower than in the city environment. For example, between 1969 and 1975 over 34,500 juveniles earned police records. Of these, only 250 or about 0.7% were kibbutz children thought kibbutz children comprise about 3% of the population (Landau, Personal communication, March 1984). According to clinical archives (Kaffman, 1965), the rates of cases of psychopathic behavior are also significantly lower in the kibbutz population than in the city population. Thus, it seems fair to conclude that kibbutz children are exposed to less interpersonal violence in their environment than are city children. In the next

section we argue that the same can be said about exposure to violence in the media.

Television Programming in Israel

Television programming in Israel is government controlled just as it is in Poland and Finland, and its introduction is relatively recent, occurring in 1969. There is only one channel with a limited selection of programs (partially due to censorship). About 60% of the programs are of foreign origin, mostly from the United States and the United Kingdom. As in Finland, the foreign programs are shown with the original sound track and subtitles in Hebrew rather than having the sound track dubbed. Many Israeli households can also receive Jordanian TV. However, the programming on Jordanian TV is also censored and contains mostly imported programs. Furthermore, since the subtitles are in Arabic and most young Israeli children cannot read it, it is doubtful that it has much impact on Israeli children.

Israeli television broadcasting is highly structured in terms of the time of day. Throughout the morning educational programs, e.g., math, English, arts, and early education shows, are broadcast. These shows are intended mostly for children. Then from noon until 3 p.m. television is devoted entirely to "the open university" programs. Some days there may be no television at this time. From 3 p.m. to 6:30 p.m. mainly children's programs are broadcast. These may include educational programs similar to "Sesame Street", children's entertainment programs, including cartoons which may be violent, or adult programs considered particularly appropriate for children, e.g., "Different Strokes." From 6:30 p.m. to 8 p.m. Arabic speaking programs are broadcast. Any children's shows, broadcast during this time, have subtitles in Hebrew. Generally, none of these shows will contain dramatic violence. From 8 to 9 p.m.

family oriented programs such as quiz shows, documentaries, family dramas, e.g. "Upstairs Downstairs", or comedies, e.g. "Love Boat", are shown. At 9 o'clock the national news is broadcast which consists mostly of visuals of the newscasters and seldom contains visual portrayals of violence. Of course, in content the news on Israeli television often contains reports of severe violence. After the news, from 9:30 to 10 or 10:30 the typical program would be a documentary either political or scientific and educational. Finally, from 10 or 10:30 until midnight adult dramas are broadcast which may at times include extensive violence. For example, the "Professionals" and "Charlies Angels" were shown during this time during the course of the study. In addition, other dramas with less explicit violence such as "Dallas" are often shown in this time. The broadcasting day closes with the final news shortly after midnight. On Saturdays there is no broadcasting at all in Israel and on Friday afternoons broadcasting is reduced with no programming from 3 to 6:30 p.m.

Television Viewing for Kibbutz & City Children

Exposure to television is quite different for children living in the city and those raised on the kibbutz. The differing structure of their daily lives, as documented above, strongly affects their access to television. While the city child has his or her afternoons relatively free of required activities and therefore can spend that time watching television, the kibbutz child is occupied until the parental visiting time at 4:30 p.m. During the kibbutz child's visit with its parents, the child may watch television. However, when the child returns to his peer group after the evening meal, it would be only rarely that more television would be watched. For the city child, on the other hand, television viewing all evening is possible if his or her parents consent. Since, as documented above, most seriously violent programs are on late at

night, the kibbutz child's access to such programs is far more limited than the city child's. Furthermore, it is much more likely that kibbutz child would observe any such program with a group of his or her peers and the "metapelet." This substantial difference between the potential exposure to television violence of kibbutz and city children coupled with the strong group structure and social bonds of the kibbutz child's society lead to the hypothesis that perceptions of television violence and reactions to television violence will be quite different in kibbutz and city raised children.

Method

Subjects

The subjects in the city sample were children in the 1st and 3rd grades at two public schools in Ra'anana, Israel. Ra'anana is a small town in the Sharon District--15 kilometers north of Tel-Aviv. The population consists mostly of upper middle-class families, and many of the fathers and mothers work in Tel-Aviv. The sample consisted of one class of 3rd graders in both schools and one class of 1st graders in one school. This gave us 39 1st graders (19 boys and 20 girls) and 73 3rd graders (37 boys and 36 girls) in the original city sample.

The children in the kibbutz sample were residents of two kibbutzim located also north of Tel-Aviv in the Sharon District (Ma'abarot and Ein-Ha'Horesh). Both of these kibbutzim had been in existance for over 40 years, and both were established by the same socialistic political movement ("Hashomer Hatzair"). The entire 1st and 3rd grade in both kibbutzim were used, giving us a sample of 38 1st graders (16 boys and 22 girls) and 26 3rd graders (12 boys and 14 girls). In addition, in one of the kibbutzim 10 2nd graders were also studied (4 boys and 6 girls) because they were in the same class with the 3rd graders. It is common to split classes in kibbutz schools due to the small number of children in each settlement. Thus, a total of 186 children were studied in the original sample -- 74 from Kibbutz schools and 112 from city schools.

During the course of the study a number of children droped out of the city sample; however, only one child (a girl) was lost from the kibbutz sample. At the same time because it was easier to test entire classes, a substantial number of new subjects were added to the city sample in years two and three. The first grade classes in the city school was broken up after the first year, and its

students were redistributed into two second grade classes. Some were transfered to another school where they could not be tested. This was the greatest single cause of subject attrition in the city sample. For most analyses only the subjects who were present for all three years will be used. Out of the 256 subjects on whom some data were obtained, 158 were interviewed in all three waves. This constituted 85% of the original sample of 186; so the overall mortality rate was only 15%. However, among city children the mortality rate was 24% compared to 1% among kibbutz children.

Procedure

The children were interviewed in the spring three times at one-year intervals, giving us an overlapping longitudinal design with data on 1st through 5th graders. The younger cohort was in the 3rd grade in the final year (third) of the study while the older cohort was in the third grade in the first year of the study. Each year, the children were interviewed in two group sessions lasting about one hour each. In addition, some information was obtained about each child from school records and teacher interviews.

Measures

A child's TV violence viewing score was based on the child's self-report of the shows he/she watched most often. In Israel three lists of nine (1981), seven (1982) or six (1983) programs each were presented to a child. From each list the child choose the two programs he/she watched most often and then rated how often he/she watched them on a three-point scale. Each list contained popular violent and non-violent programs, child or adult oriented. The violence of each show was rated by 5 independent raters (interrater reliability ws above .70). Their average rating was the program's score. Two violence viewing scores were computed for each child. One was the simple mean of the violence

ratings for the six programs the child selected. This is called the "violence of the child's favorite programs." For the other score each violence rating was weighted by the frequency of viewing that show as reported by the child. This score is called the child's overall "TV violence viewing." A separate summed frequency of viewing score was also computed representing how "regularly" the child watched his/her favorite shows.

Besides measuring violence viewing and frequency we asked each child questions about the child's belief in the "realism of certain violent television programs" and questions about the extent to which the child "identified with various TV characters". These measures have been described in detail elsewhere (Huesmann, et al., 1984). For each of 6 violent shows, the child was asked "how much does the program tell about life like it is?" Does it tell about life just like it is, a little bit like it is, or not at all like it is? A child who scored high would be one who believed that violent shows tell about life just like it is. The children were also asked the extent to which they thought they resembled (in behavior) 4 popular characters: an aggressive male, an aggressive female, an unaggressive male, and an unaggressive female. Two scores were derived -- a total identification score, and an identification with aggressive character score.

The primary measure of overt aggression was a modified version of the widely used peer-nominated index of aggression (Eron, et al., 1971; Huesmann, et al., 1984) in which each subject in the sample names all the subjects in his class who have displayed 10 specific aggressive behaviors during the last school year, e.g., "Who starts a fight over nothing." This measure has been used in many countries and is both highly reliable (Coefficient Alpha > .95) and valid. In the final wave of the study, the children also completed self-ratings of aggression which provided concurrent validation in the Israeli population.

Peer-nominations were also obtained on two questions that measured the children's polularity -- "Whom would you like to sit next to?" and "Whom would you like to have as a best friend." One other peer-nomination question was asked which is relevant for this paper -- "Who never fights even when picked upon." This avoidance of aggression question correlated very negatively with the aggression questions. It was found that the ratio of the aggression to the avoidance of aggression scores provided a measure of aggression that corrected for general nomination biases in the two populations.

Two additional measures of the children's behavior were obtained that were hypothesized to differ across the populations and to be related to TV habits. The child's use of aggressive fantasy was evaluated with part of the Children's Fantasy Inventory (Rosenfeld, Huesmann, Eron, & Torney, 1982). The child answers a number of questions about how often he/she daydreams about or imagines acting in certain ways. From these self-ratings a scale of "aggressive fantasy" was derived. A child who scores high would be one who frequently has aggressive daydreams. The children's preferences for sex-typed activites were also evaluated with a techniques described elsewhere (Huesmann, et al., 1984). Over several trials each child selected the games or activities he or she liked best from sets of male, female and neutral activities (as determined by surveys in the society). A subject received 3 scores representing his or her preference for male, female and neutral activities.

To evaluate the role of possible social class differences between the kibbutz and city samples, measures were taken in a teacher's interview and from school records as to ethnic background, place of birth, parents' education (number of years of schooling) and parents' occupation which was scored for status according to Hartman (1975). Finally, each child completed a Draw-a-Person (Harris, 1963) which was scored for intellectual development.

Results

Before examining the TV habits of the kibbutz and city samples, let us consider how they differ on demographic variables. The differential attrition rate in the two samples (described in the "subjects" section) is in itself an important demographic difference. This difference indicates the rather closed and static nature of kibbutz life in which low mobility is the norm. In a number of various studies in western countries, higher family mobility has been associated with higher levels of child aggression (Eron, Huesmann, Dubow, Romanoff and Yarmel, in press; Lefkowitz, Eron, Walder and Huesmann, 1977). Thus, attrition in the city sample might have selectively eliminated the higher aggression children, but, of course, not in the kibbutz sample where there was no attrition.

The ethnic background of the kibbutz and city children also differs significantly. The major difference is that the parents of kibbutz children were more likely to be native born ("sabras") than were the parents of city children. Since ethnic background was only measured in terms of the parents' origins, there is no way of knowing the original ethnicity of the Israeli born parents.

The number of years of education of the parents in the two samples was about the same: both mothers and fathers averaged about one and one-half years of education beyond high school. Similarly, kibbutz and city fathers did not differ in their average occupational status as measured by the Hartman Occupational Status Scale (1975). However, the standard deviation of occupational status scores was about 21% higher for the city fathers. While there were a few city fathers who were doctors and lawyers and a few with low status occupations, the statuses of most kibbutz fathers' occupations were homogenous and in the middle range.

The one substantial difference between kibbutz and city families on traditional socioeconomic variables was that kibbutz mothers all work and on the average have lower status occupations than working city mothers ($F(1,109)=6.4$, $p< .013$). Only 64% of city mothers worked.

In conclusion, although both populations are apparently within the upper-middle range of socioeconomic status, as represented by level of occupation and years of education, the kibbutz group is far more homogeneous than the city group.

Television Habits in Kibbutz and City Children

The mean scores on the major television variables are compared for kibbutz and city children in Slide 1. One can see that city children on the average watched their favorite programs more regularly ($F(1,139)=12.36$, $p<.001$), were exposed to more television violence (frequency weighted violence, $F(1,139)=4.13$, $p<.05$), and perceived television violence as marginally more like real life than did kibbutz children ($F(1,137)=3.33$, $p<.07$). City children also identified more with TV characters in general ($F(1,94)=5.40$, $p<.025$), and city boys identified more with violent characters (Interaction $F(1,108)=5.14$, $p<.05$). However, kibbutz children's prefered shows were just as violent ($F(1,139)=0.10$, n.s.). All these findings are consistent with the picture of kibbutz children living in an environment with far fewer opportunities to observe media violence but being similar to city children in their reaction to television.

Display Slide 1 about here

Demographic Factors and TV Viewing

TV violence viewing did not vary significantly with the family's ethnic origin. However, the same reservations apply about the interpretation of this result--namely ethnicity is much too confounded with kibbutz-city status to permit a clear interpretation.

TV viewing habits do relate significantly to parents' educational status among both populations of children but in different ways as Slide 2 illustrates. For city boys frequency of viewing favorite programs and violence viewing are inversely related to parents' education ($r = -.42$, $p<.01$ and $r = -.22$, n.s., respectively). This result is comparable to what has been reported from other countries. However, unlike some other countries, the sons of working mothers in the city sample watched less TV ($r = -.38$, $p<.05$) and less TV violence ($r = -.37$, $p<.05$) than the sons of non-working mothers. Again, this latter result may be a function of the fact that in the suburban communitiy in which the study was conducted more highly educated mothers are more likely to be working ($r = .52$, $p<.001$). For city girls and the kibbutz children, the relations between TV viewing habits and parental education were quite different than those for city boys. More educated parents had children who watched their favorite programs more and watched more TV violence. This effect was strongest for city girls. However, there were significant effects for both kibbutz boys and kibbutz girls as well. Since most of the kibbutz child's TV viewing is done in the parents' quarters, it is not surprising that these parent variables affect the kibbutz child's TV habits. However, the direction of the effect is surprising. Perhaps, the more highly educated and higher status parents spend less time with thir children during the "childrens hour."

Display Slide 2 about here

Intercorrelations of TV Behaviors

The extent to which regularity of viewing predicts other TV scores is shown in Slide 3. Among most children regularity is correlated with the perception that Tv violence reflects real life. Among girls regularity of viewing is also correlated with a preference for violent programs, and among city boys it is correlated with greater identification with TV characters.

Display Slide 3 about here

What would happen to the kibbutz-city differences in TV habits and perceptions if one controlled statistically for the differences in viewing regularity? This was checked with an analysis of covariance using regularity as the covariate. Slide 4 shows the results. The kibbutz -city differences in the children's perception of how "true to life" TV violence seems disappeared. However, city children and city boys in particular still identified more with TV characters than did kibbutz boys.

Display Slide 4 about here

To summarize, kibbutz children watch less television. As a result they see less television violence, and they are less likely to believe that the violence they see on TV reflects real life. Independently of how much TV they see, kibbutz children are less likely to identify with the characters they do see. Unlike city boys and boys in most other countries, kibbutz boys whose parents are more educated are more likely to watch some violent shows.

TV Habits and Differences in Behavior

Let us now examine whether these differences in TV habits and perceptions of TV may be related to differences in behaviors that have been observed between kibbutz and city children. One cannot directly compare the kibbutz and city children on the peer-nominated aggression scale because different nomination criteria may have been used in the two samples. However, later we will examine whether peer-nominated aggression relates differentially to TV habits in the two populations. First, though, let us examine two self-rated characteristics, related to aggression, that do differ between kibbutz and city raised children -- aggressive fantasizing and preferred type of games and activities. In Slide 5 the observed scores on our aggressive fantasy scale are displayed for kibbutz and city children. City children (particularly boys) engage in significantly more aggressive fantasy. In Slide 6 the average scores on the measures of preference for sex-typed activities are shown. Again the differences were significant. Kibbutz children are more likely to prefer less rigidly sex-typed activities (neutral) than are city children. Both of these variables are closely related to aggressive behavior as Slide 7 reveals.

Display Slide 5, Slide 6, & Slide 7 about here

In Slide 8 the relation of aggressive fantasy to the child's TV habits and perceptions is displayed. For most subjects identification with TV characters is correlated with greater aggressive fantasy. Among kibbutz girls and city boys aggressive fantasies are also correlated with more regular viewing, more violence viewing, and a perception that the violence is real. Kibbutz children may view less TV, but, even so, their individual differences in fantasy behavior are related to their TV habits and perceptions of TV. Similarly, as Slide 9

shows, individual differences in preference for sex-typed activities correlates with TV habits and perceptions. Among kibbutz children and city boys, a more masculine and less neutral orientation is associated with higher scores on the TV variables. Among city girls a less feminine (and therefore more masculine or neutral) orientation seems to be associated with higher TV scores.

These within sample relations are consistent with the between sample differences. Higher scores on the TV variables are associated with more aggressive fantasy and stronger sex-typing. The city children score higher on most TV variables and score higher on aggressive fantasy and preference for sex-typed activities. However, when we turn to the relation between aggressive behavior and TV habits and perceptions, we see some quite different relations within the two populations.

Display Slide 8 & Slide 9 about here

Television Habits and Aggression

Slide 10 contains the correlations between the ratio of aggression nominations to avoidance of aggression nominations with the various television variables averaged over the three years of the study for each gender and population group. The results are very clear cut. Television violence viewing is very significantly correlated with aggressiveness among both city boys and girls but not among kibbutz children. These significant correlations among city children are quite substantial, in fact, much higher than what has been found in most other countries. Interestingly, among kibbutz children, there is not the least indication of a correlation between aggression and violence viewing, but those boys (to a slight extent) and those girls (to a great extent) who perceive

themselves as being like TV characters are the more aggressive children. The relation between TV violence viewing and aggression among city children is illustrated in Slide 11. City children were divided into the lower 25%, middle 50%, and upper 25% on TV violence viewing, and their mean aggression scores were plotted.

Display Slide 10 and Slide 11 about here

Before examining the causal ordering of aggression and TV habits with longitudinal analyses, one must ask if the observed correlations might be spurious and due to the effect of a third variable. In particular, can the parent's education, socioeconomic status, the child's IQ or the child's age be generating the relation? In the current study, there were no significant correlations between the child's IQ and either TV habits or aggression. Unfortunately, the IQ scores had to be derived from Draw-a-Person tests given in group settings. Thus, the IQ's have questionable validity, and their failure to correlate with either TV habits or aggression should not be given much credence. In most other countries and many previous studies IQ has consistently correlated with both aggression and TV habits. As discussed earlier, parent's eduction correlated positively with violence viewing and aggression among city girls, negatively among city boys, and not at all among kibbutz children. Father's occupational status displayed similar relations. The child's age also correlated differentially with violence viewing depending on the population. Older kibbutz children view TV violence less regularly perhaps because their structured life allows less time for it. Despite these relations, when parent's education, father's occupational status, child's IQ, and child's age were all

partialed out of the relation between violence viewing and aggression among city children, these latter variables remained very significantly correlated (.39 for girls and .42 for boys). Thus, the relation between violence viewing and aggression cannot be attributed to these variables.

The causal relation between violence viewing and aggression in the city population can best be examined by the multiple regressions shown in Slide 12. From Slide 12 one can see that a city child's average TV violence viewing over the first two waves of the study was a significant predictor of that child's aggression in the last year. This was true even when initial levels of aggression and avoidance of aggression were partialed out by adding those variables to the regressions, and it was true for both boys and girls. In other words, greater violence viewing was predictive of greater later aggressiveness independently of initial aggression.

Display Slide 12 about here

Having established that in city but not kibbutz children television violence viewing seems to engender aggressive behavior, one must ask what factors produce the difference between these populations and what these factors suggest about the psychological processes that are involved. The most obvious differences, of course, are that city children have more control over their TV viewing, watch more TV violence, and perceive the violence as being more like real life. Most violence, in fact, is shown after 9 p.m. when kibbutz children have few opportunities to observe it. This time factor may also partially explain why the correlations within the city sample are more substantial than those found in other countries. The children who see more violence must be the

ones who are staying up later; so violence viewing is confounded with age and parental attitudes and child rearing practices. Nevertheless, one cannot simply dismiss the effect as an artifact of child's age and parental attitudes. The partial correlations controlling for age and parents' socioeconomic status were not much lower than raw correlations. Kibbutz children also identified less with TV characters than did city children. However, identification with characters related just as strongly to aggression within the kibbutz sample as the city sample. This result is consistent with the data from several other countries as well (Huesmann, et al., 1984).

In their analysis of the effects of media violence on children's aggression in Finland and the United States, Huesmann, et al. (1984) have emphasized the role of social norms for aggression as exacerbating or mitigating factors. For example, they suggest that the reason why females are now susceptable to media violence in the USA but were not 20 years ago and are not now in Finland is because of the current emphasis on female assertiveness and aggressiveness in the USA. The data on the relation between popularity and aggression in Israel suggest that a similar difference in attitudes about aggression between kibbutz and city children may be contributing to the differential effect of media violence. Aggression was an unpopular behavior among kibbutz children ($r=-.61$, $p<.001$ for kibbutz boys; $r=-.44$, $p<.01$ for kibbutz girls) but was not related to popularity among city children. This suggests that the imitation of specific interpersonal aggressive acts observed on a TV show or in a movie may be met with far more reprobation when committed by a kibbutz child than when committed by a city child. Since kibbutz children believe that the violence shown on TV is not representative of the real world, and, since they identify less with TV characters (perhaps because they see less TV), they are less likely to accept

aggressive behavior as the norm. Thus, the combination of children having substantially decreased opportunities to observe violence coupled with peer-attitudes that are less tolerant of aggression and more skeptical about the reality of TV violence makes it less likely that the aggressive strategies observed on TV will be encoded for later use and makes it less likely that such strategies will be retrieved when a child is faced with a social problem.

Summary and Discussion

The subjects in this study came from two distinctly different cultural environments: -- city and kibbutz -- with quite different opportunities to observe TV. In fact, the children's TV habits and perceptions of TV were quite different in the two populations. These TV habits and perceptions were related significantly to the children's preference for sex-typed activites and aggressive fantasizing within both populations. Moreover, the between population differences on these variables were consistent with the between population differneces in TV viewing. However, the most notable difference between the two populations involved the relations between TV violence viewing and aggressive behavior. Among city children a significant positive relation was found between television violence viewing and amount of aggressive behavior. In fact, the magnitude of the correlation was higher for Israeli city children than for children in any other country. Furthermore, the longitudinal effects seemed to be more from violence viewing to aggression than from aggression to violence viewing. City children who viewed violence more often appeared to become more aggressive relative to the rest of the children over the course of the study. To these authors it is surprising that such results should occur in a country in which only a few violent programs are broadcast late at night each week and in which the environment contains regular examples of real salient violence to which the child is exposed. However, the most important finding in this study is that these relations between exposure to media violence and aggression were not obtained for children raised on a kibbutz. More aggressive kibbutz children do identify more with aggressive TV characters, but there is no detectable relation between amount of exposure to TV or TV violence and aggression in kibbutz children.

What are the essential factors associated with growing up on a kibbutz that mitigate the effect of TV violence viewing on the development of aggressive behavior? The most obvious and direct factor is the different patterns of TV viewing observed among kibbutz children. Because of their daily schedule, kibbutz children are exposed less to television particularly during the evening hours. This fact minimizes their opportunities to watch violent programs since these (with a few exceptions, e.g. cartoons) are broadcast late at night. Like city children and children in other countries, they "like" action shows containing violence, but these programs are rarely accessible for kibbutz youngsters.

Another characteristic of kibbutz TV and film exposure that may mitigate against any behavioral effects is group viewing. A number of studies (e.g. Adoni & Cohen, 1979; Hicks, 1968) have suggested that the presence of co-observers, and particularly adult co-observers who comment on the material, may mitigate against imitation of the material by the child. The kibbutz child is most likely to watch television with other people. They either watch in the family quarters during the "afternoon family hour" when the parents are always there, or they watch in the evening with their peer-group and adult caretaker. Moreover, sitting alone in front of a TV would generally not be accepted as an appropriate behavior for a kibbutz child. Associated with the kibbutz style of life is a continuous stream of organized group activities for children. Especially, for older children there are always alternative modes of entertainment to sitting in front of a TV. Thus, it is not surprising that for kibbutz children in Israel, unlike children in some other countries in this study, TV viewing declined with age.

In addition to the natural constraints on TV viewing, though, there are other powerful characteristics of the kibbutz environment that probably minimize the impact of TV violence on the development of aggression. Most important, perhaps, is the power of the peer-group. From infancy onward the peer-group prescribes acceptable norms of behavior and establishes intra-group sanctions against deviations from these norms. For children peer-group prescriptions for certain prosocial behaviors and sanctions against aggressive behavior are undoubtedly more powerful factors in social learning than infrequent exposures to television models. Of course, the peer-group's prescriptions are molded by the adult community of the kibbutz through the caretakers and teachers. However, even the parent's views and behaviors seem to be less important to the kibbutz child than the collective norms. Thus, several parental and demographic variables that were discovered to be related to aggressiveness in city children (ethnic background, parents' education, parents' occupations) were not related to aggressiveness in kibbutz children. At the same time, individual differences in the patterns of TV viewing of kibbutz children were correlated with individual differences in their parents' patterns. Such a result is to be expected since almost the only opportunity that a kibbutz child has for differential viewing is at home during the family hour.

It also seems clear that aggressiveness in general is less acceptable among kibbutz children than city children. Unpopularity was very significantly related to aggressiveness among kibbutz children but not among city children. Of the upper quartile of children who were most aggressive in the kibbutz sample, not one scored in the upper quartile on popularity. Yet of the city children in the upper quartile on aggression, 18% scored in the upper quartile on popularity. Kibbutz children also fantasize less about being aggressive. In

short, the powerfull group norms against aggression prevalent in the kibbutz society seem to be the most important factor in mitigating the effect of what little media violence the kibbutz child observes. The power of cultural norms to influence aggression has been documented in a number of countries and cultures (Landau, 1982).

In conclusion, in a children's society in which values and norms of behavior are clear, where accountability to the society is emphasized, where interpersonal aggression is explicitly criticized, and where solo TV and film viewing are infrequent, the children's aggressive behavior is influenced very little, if at all, by what media violence they do observe.

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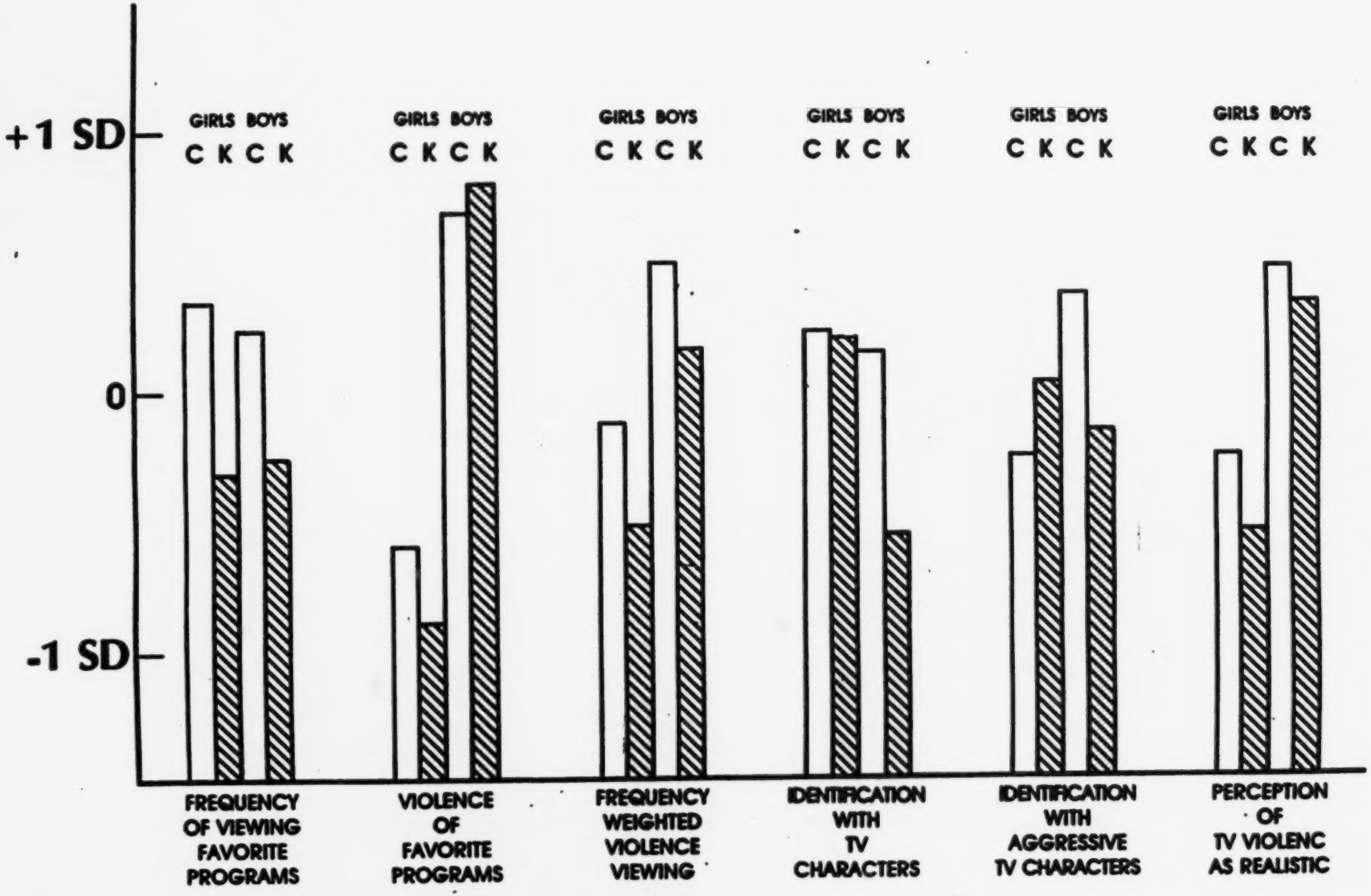
Footnotes

1. Moshav is another form of rural settlement in Israel which is a cooperative organization with limited liability for members. There is considerable amount of mutual solidarity as well as cooperative economic enterprise, but the family is the basic economic and social unit as in the cities. However, in terms of population size, the moshav is similar to the kibbutz.

2. These analyses were repeated partialing out the initial ratio of aggression to aggression-avoidance. The results remained the same except that the initial ratio was not as good a predictor of the final ratio as were peer-aggression and peer-aggression-avoidance separately.


+1 SD
0
-1 SD
GIRLS BOYS
C K C K
FREQUENCY OF VIEWING FAVORITE PROGRAMS
VIOLENCE OF FAVORITE PROGRAMS
FREQUENCY WEIGHTED VIOLENCE VIEWING
IDENTIFICATION WITH TV CHARACTERS
IDENTIFICATION WITH AGGRESSIVE TV CHARACTERS
PERCEPTION OF TV VIOLENC AS REALISTIC

Slide 1

Huesmann & Bachrach

CORRELATIONS OF PARENTS' EDUCATION WITH

TV HABITS AVERAGED OVER 3 YEARS

TELEVISION VIEWING VARIABLES	PARENTS' EDUCATION			
	GIRLS		BOYS	
	CITY	KIBBUTZ	CITY	KIBBUTZ
REGULARITY OF VIEWING FAVORITE PROGRAMS	.26 (N=33)	---	-.42** (N=40)	.33+ (N=28)
VIOLENCE OF FAVORITE PROGRAMS	.37* (N=33)	---	---	.26 (N=28)
TV VIOLENCE VIEWING (REGULARITY X VIOLENCE)	.47** (N=33)	.23 (N=40)	-.22 (N=40)	.33+ (N=28)
IDENTIFICATION WITH ALL CHARACTERS	---	---	-.25 (N=34)	.36 (N=17)
IDENTIFICATION WITH VIOLENT CHARACTERS	---	---	---	.56** (N=22)
PERCEIVED REALISM OF VIOLENT PROGRAMS	.22 (N=32)	---	---	.33+ (N=28)

+P<.01 *P<.05 **P<.01 ***P<.001

Huesmann & Bachrach

CORRELATIONS OF REGULARITY OF VIEWING FAVORITE PROGRAMS

WITH OTHER TV HABITS AVERAGED OVER 3 YEARS

TELEVISION VIEWING VARIABLES	REGULARITY OF VIEWING			
	GIRLS		BOYS	
	CITY	KIBBUTZ	CITY	KIBBUTZ
VIOLENCE OF FAVORITE PROGRAMS	.30+ (N=34)	.32* (N=41)	---	---
TV VIOLENCE VIEWING (REGULARITY X VIOLENCE)	.68*** (N=34)	.74*** (N=41)	.75*** (N=42)	.86*** (N=30)
IDENTIFICATION WITH ALL CHARACTERS	---	---	.37* (N=35)	---
IDENTIFICATION WITH VIOLENT CHARACTERS	---	---	.37* (N=36)	---
PERCEIVED REALISM OF VIOLENT PROGRAMS	---	.49** (N=39)	.25+ (N=42)	.39* (N=30)

+P<.10 *P<.05 **P<.10 ***P<.001

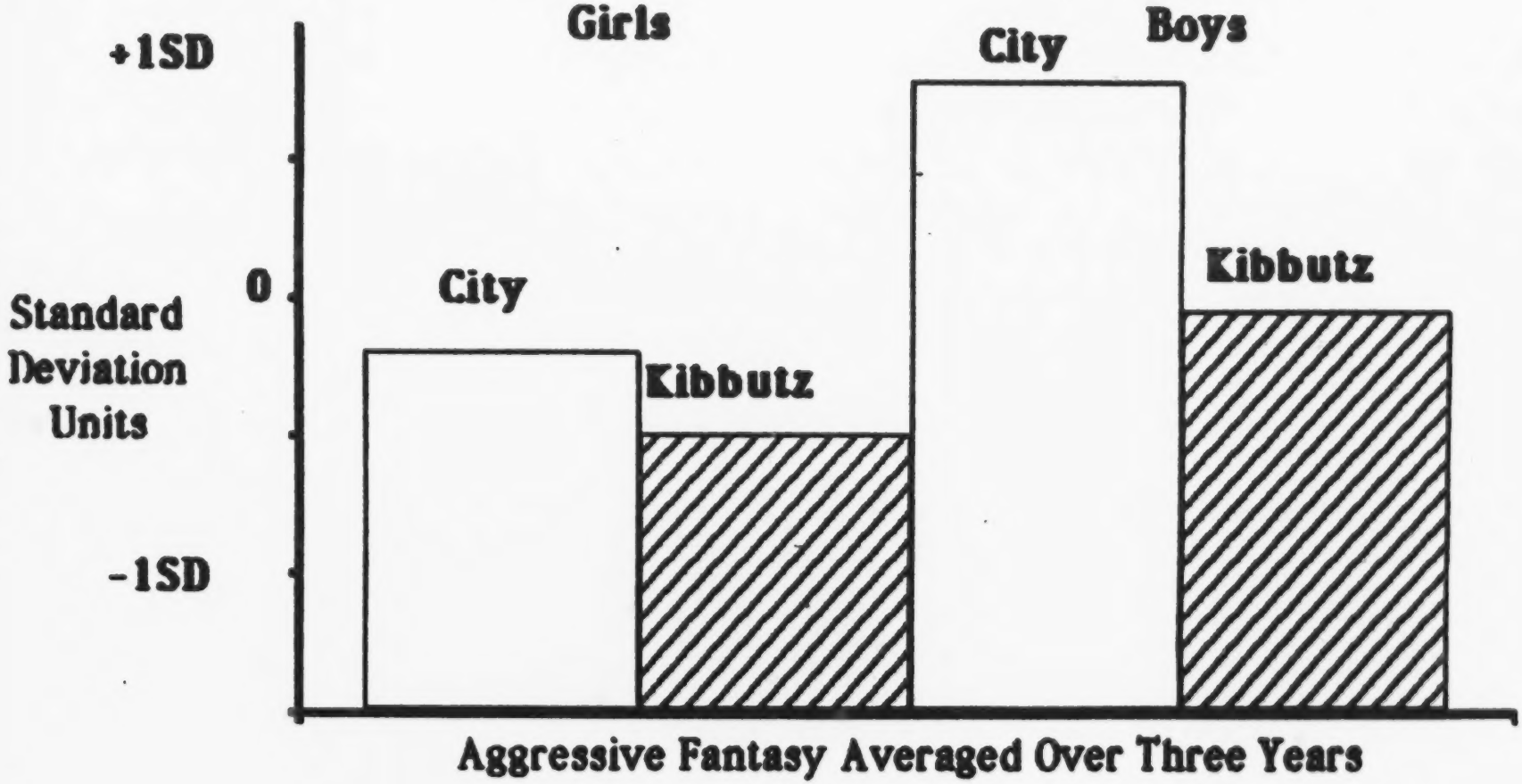
Huesmann & Bachrach

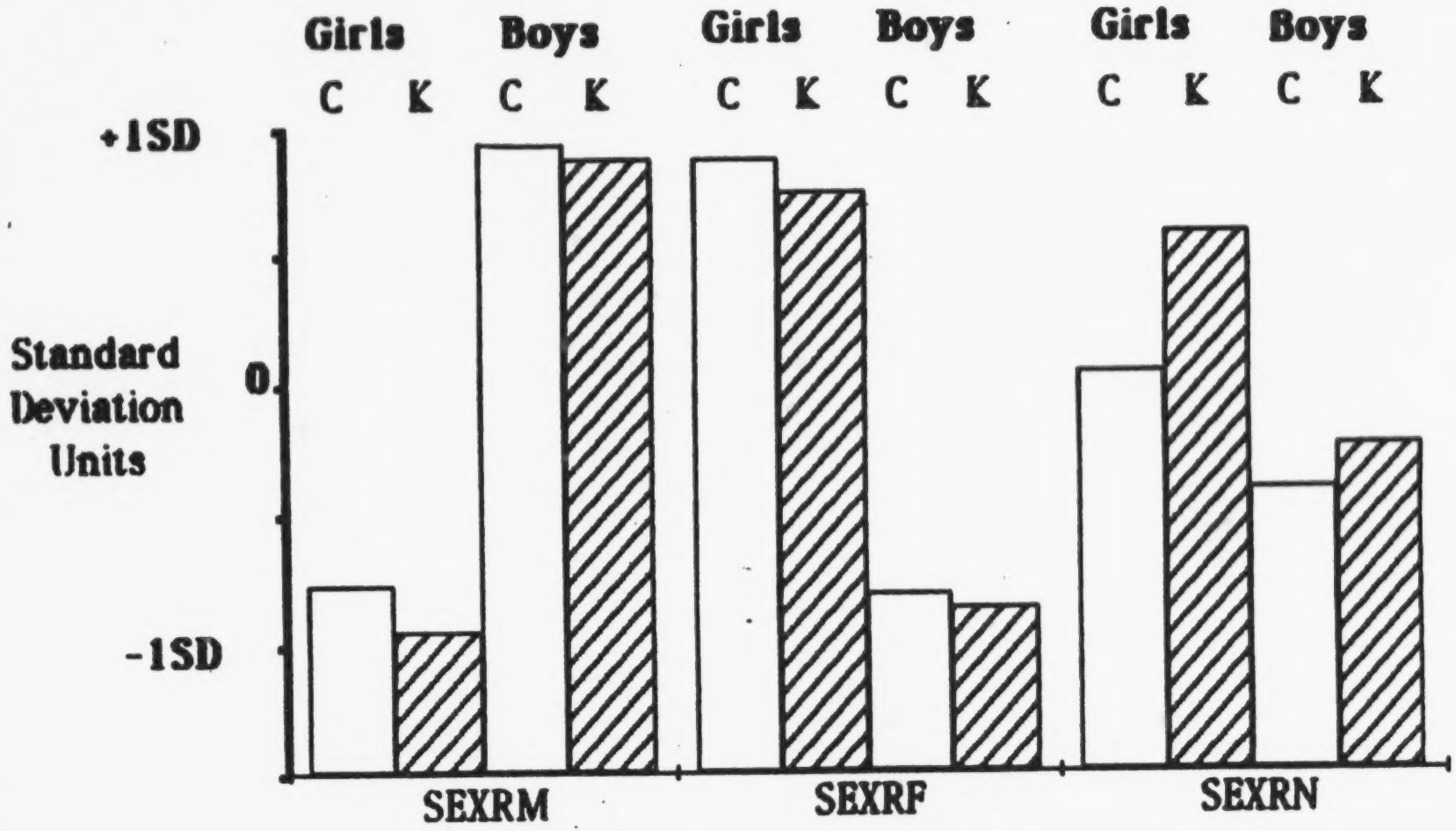
RESULTS OF ANALYSES OF VARIANCE AND COVARIANCE

OF TV HABITS WITH TV REGULARITY AS COVARIATE

DEPENDENT VARIABLE	EFFECT	F WITHOUT COVARIATE	F WITH "REGULARITY OF TV VIEWING" AS COVARIATE
REGULARITY OF VIEWING FAVORITE PROGRAMS	SEX	---	
	KIBBUTZ	12.36***	
	S x K	---	
VIOLENCE OF FAVORITE PROGRAMS	SEX	80.88***	81.98***
	KIBBUTZ	---	---
	S x K	---	---
TV VIOLENCE VIEWING (REGULARITY X VIOLENCE)	SEX	20.64***	38.55***
	KIBBUTZ	4.13*	---
	S x K	---	---
IDENTIFICATION WITH ALL CHARACTERS	SEX	5.09*	4.14*
	KIBBUTZ	5.40*	3.80*
	S x K	---	---
IDENTIFICATION WITH VIOLENT CHARACTERS	SEX	---	---
	KIBBUTZ	---	---
	S x K	5.14*	4.49*
PERCEIVED REALISM OF VIOLENT PROGRAMS	SEX	19.59***	17.38***
	KIBBUTZ	3.33+	---
	S x K	---	---

+P<.10 *P<.05 **P<.01 **P<.001


+1SD
0
-1SD
Standard Deviation Units
Girls
City
Kibbutz
Boys
City
Kibbutz
Aggressive Fantasy Averaged Over Three Years


Girls
Boys
Girls
Boys
Girls
Boys
C K C K C K C K C K C K
+1SD
Standard
Deviation
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SEXRF
SEXRN

41

42

Slide 6

Huesmann & Bachrach

CORRELATIONS OF A CHILD'S AGGRESSIVE BEHAVIOR WITH THE CHILD'S AGGRESSIVE FANTASY AND PREFERENCE FOR SEX-TYPED ACTIVITY AVERAGED OVER 3 YEARS

	AGGRESSIVE BEHAVIOR			
	GIRLS		BOYS	
	CITY	KIBBUTZ	CITY	KIBBUTZ
AGGRESSIVE FANTASY	---	.25 (N=39)	.24 (N=42)	.52** (N=29)
PREFERENCE FOR MALE SEX-TYPED ACTIVITY	.24 (N=35)	.43** (N=40)	.19 (N=43)	---
PREFERENCE FOR NEUTRAL SEX-TYPED ACTIVITY	.27 (N=35)	-.45** (N=40)	-.28+ (N=43)	---

+P<.10 *P<.05 **P<.01 ***P<.001

Huesmann & Bachrach

CORRELATIONS OF A CHILD'S AGGRESSIVE FANTASY

WITH THE CHILD'S TV HABITS AVERAGED OVER 3 YEARS

TELEVISION VIEWING VARIABLES	AGGRESSIVE FANTASY			
	GIRLS		BOYS	
	CITY	KIBBUTZ	CITY	KIBBUTZ
REGULARITY OF VIEWING FAVORITE PROGRAMS	---	.39** (N=40)	.36* (N=41)	---
VIOLENCE OF FAVORITE PROGRAMS	---	.29+ (N=40)	---	---
TV VIOLENCE VIEWING (REGULARITY X VIOLENCE)	---	.39** (N=40)	.21 (N=41)	---
IDENTIFICATION WITH ALL CHARACTERS	.33+ (N=33)	.25 (N=16)	---	.26 (N=18)
IDENTIFICATION WITH VIOLENT CHARACTERS	.38* (N=31)	.38+ (N=25)	.26 (N=36)	---
PERCEIVED REALISM OF VIOLENT PROGRAMS	---	.38* (N=39)	.36* (N=42)	---

+P<.10 *P<.05 **P<.01 ***P<.001

Huesmann & Bachrach

CORRELATIONS OF PREFERENCE FOR SEX-TYPED ACTIVITIES

WITH TV HABITS AVERAGED OVER 3 YEARS

TELEVISION VIEWING VARIABLES	KIND OF SEX-TYPED ACTIVITY: MALE				NEUTRAL			
	GIRLS		BOYS		GIRLS		BOYS	
	CITY	KIBBUTZ	CITY	KIBBUTZ	CITY	KIBBUTZ	CITY	KIBBUTZ
REGULARITY OF VIEWING FAVORITE PROGRAMS	.38* (N=34)	---	---	.49** (N=30)	---	---	---	-.30+ (N=30)
VIOLENCE OF FAVORITE PROGRAMS	.30+ (N=34)	---	---	---	.43** (N=34)	---	---	---
TV VIOLENCE VIEWING (REGULARITY X VIOLENCE)	.32+ (N=34)	---	---	.46** (N=30)	.35* (N=34)	---	---	---
IDENTIFICATION WITH ALL CHARACTERS	---	---	---	---	---	-.55* (N=16)	---	---
IDENTIFICATION WITH VIOLENT CHARACTERS	---	---	.38* (N=37)	---	---	-.55** (N=25)	-.38* (N=37)	---
PERCEIVED REALISM OF VIOLENT PROGRAMS	.44* (N=33)	---	---	.30+ (N=30)	---	---	-.30* (N=43)	-.31+ (N=23)

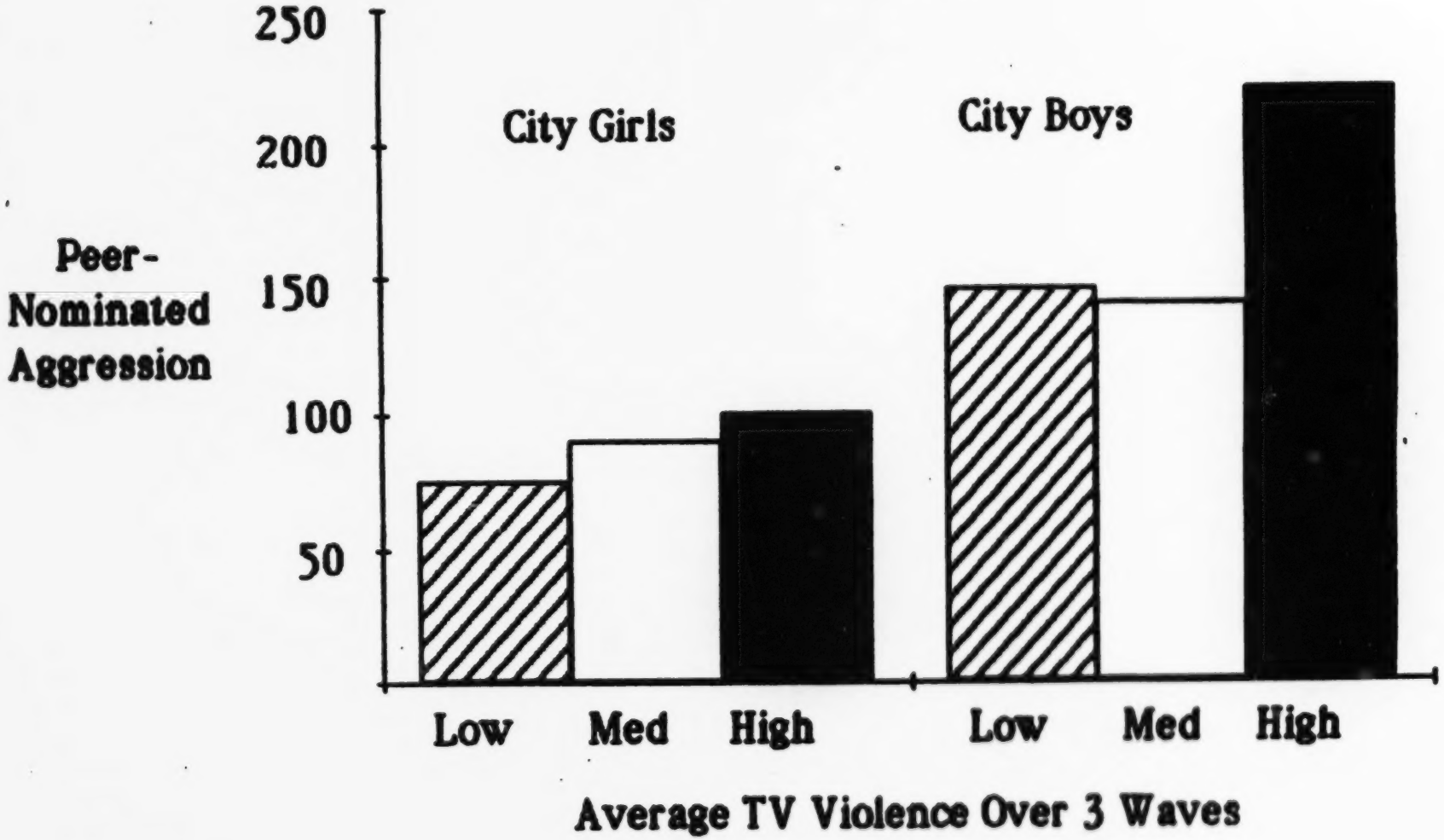
+P<.10 *P<.05 **P<.01 ***P<.001

The Correlations of Average Aggressiveness Over All Three Waves With Average Television Viewing

Television Viewing Variables	Correlations with Aggression			
	Girls		Boys	
	City	Kibbutz	City	Kibbutz
Regularity of Viewing Favorite Programs	.28 (N=34)	---	.42** (N=42)	---
Violence of Favorite Programs	.42** (N=34)	---	.24 (N=42)	---
TV Violence Viewing (Regularity x Violence)	.48** (N=34)	---	.45** (N=42)	---
Identification with All Characters	---	.66** (N=15)	.34* (N=35)	.33 (N=17)
Identification with Violent Characters	---	.68*** (N=24)	.29+ (N=37)	---
Perceived Realism of Violent Programs	---	---	---	---

+p<.10 *p<.05 **p<.01 ***p<.001

Aggression was measured as the ratio of peer-nominations on aggressive items to nominations on the aggression avoidance items.



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48

Slide 11

Multiple Regressions Predicting City Children's Aggression From earlier TV Violence Viewing Controlling for Initial Levels of Aggression and Aggression Avoidance

Criterion Variable	Predictor Variable	Standardized Regression Coefficients City Girls	City Boys
Ratio of Aggression to Aggression Avoidance in Third Wave			
	Grade	-.21	-.31*
	Peer-Aggression Wave 1	.55**	.58***
	Peer-Aggression Avoidance Wave 1	-.08	-.03
	TV Violence Viewing Waves 1 & 2	.52**	.29*
		R^2 =.46, $F(4,29)$=6.13, $p<.001$	R^2 =.44, $F(4,37)$=7.3, $p<.001$